

**REMARKS**

Claims 1-5, 7-14 and 16-22 are currently pending in the subject application and are presently under consideration. Claims 1-3, 9, 16, and 22 have been amended as shown at pages 2-4 of the reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

**I. Rejection of Claims 1-3, 5, 11, 12, 14, 16-18 and 20-22 Under 35 U.S.C. §103(a)**

Claims 1-3, 5, 11, 12, 14, 16-18 and 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,115,615 Halperin *et al.* (Halperin) and further in view of US Patent No. 5,537,673 Nagashima *et al.* (Nagashima). Withdrawal of this rejection is requested for at least the following reason. None of Halperin and Nagashima individually or in combination, teaches or suggests all the claim limitations of the subject invention.

A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. See *KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727 (2007) citing *Graham v. John Deere Co. of Kansas City*, 383 U. S. 1, 36 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to ““guard against slipping into the use of hindsight”” (*quoting Monroe Auto Equipment Co. v. Heckethorn Mfg. & Supply Co.*, 332 F. 2d 406, 412 (CA6 1964))).

The present application relates generally to key pad assemblies, and more particularly to systems and methods that provide for a top cover and bottom cover being over molded around an entire common boundary there between, to encapsulate various key pad components, and for automatically identifying a self contained key pad.

**Independent Claim 1**

Independent claim 1 recites in part *a key pad assembly comprising: a top cover placed over a stack of keypad components; a bottom cover placed under the stack; the top cover and the bottom cover over molded around the stack to form a self contained key pad unit.* Halperin is silent regarding the aforementioned novel features. The cited reference discloses a detachable

keyboard for a telephone set, provided in the form of a keyboard card clipped to the headset, which is completely detached from the body when unclipped [See Abstract]. Incorrectly asserting that Halperin discloses a top cover and a bottom cover over molded around the stack, the Examiner cites a keyboard card in a detached and clipped position with respect to the main body of a handset between the microphone and the speaker. However, in no manner are a distinct top cover and a distinct bottom cover disclosed. Furthermore, the figure cited by the Examiner displays a keyboard that clips to the outer surface of the headset, with no depiction or corresponding specification of the keyboard's physical structure aside from a series of contacts. As such, the cited reference does not disclose a *top cover and a bottom cover over molded around the stack to form a self contained key pad unit*, as claimed.

Independent claim 1 further recites in part, *an identification component that automatically identifies the key pad to a device that hosts the self contained key pad unit*. The Examiner acknowledges that the primary reference, Halperin, does not teach the claimed subject matter, and provides a secondary reference, Nagashima, to compensate for the deficiencies; however, Nagashima is silent regarding the aforementioned novel feature. Nagashima discloses a removable panel with a plurality of operation buttons for operating a car stereo, the buttons operating a cellular telephone system capable of transmitting an instruction to render the car stereo inoperative [See Abstract]. To that end, as a security feature, in order to render the car stereo and the telephone operative after the car stereo is returned to the owner following a theft, the operation buttons on the panel are consecutively operated to input a predetermined code which is assigned to each stereo as an identification code and stored in the ROM or RAM of the system microcomputer by the owner. The input code is compared with the code stored in the ROM or RAM in order to resume operation [See col. 6 lines 11-23]. As acknowledged by the Examiner, Nagashima teaches entering a predetermined code that identifies the removable panel to the car stereo. However, the cited reference makes no mention as to automatic identification, instead requiring user input. As such, Nagashima, alone or in combination with Halperin, fails to disclose *an identification component that automatically identifies the key pad to a device that hosts the self contained key pad unit*, as claimed.

#### Independent Claim 11

Independent claim 11 recites in part *sandwiching a plurality of key pad components*

***between a top cover and a bottom cover and inserting molding around the key pad components for an encapsulation thereof between the top cover and the bottom cover.*** Halperin is silent regarding the aforementioned novel features. The cited reference discloses a detachable keyboard card, capable of clipping to the main body of the handset [See Abstract]. Additionally, the cited reference makes no mention of, nor displays in a figure, a top cover and a separate bottom cover with respect to the aforementioned detachable keyboard card. As such, Halperin fails to teach or suggest a key pad encapsulated by a top cover and a bottom cover, with molding around the key pad components, as claimed.

Independent claim 11 further recites in part ***automatically identifying the self contained key pad to a host unit upon mounting thereon by an identification tag.*** As conceded by the Examiner, Halperin fails to disclose this novel feature, and thus Nagashima is cited to remedy the acknowledged deficiency. However, Nagashima fails to accomplish such an end. The cited reference discloses a car stereo antitheft system wherein a user input code must match a predetermined stored code to restore stereo operation [See col. 6 lines 11-23]. By requiring a user input, Nagashima discloses non-automatic identification of the stereo telephone by the car. As such, Nagashima, alone or in combination with Halperin, fails to disclose the automatic identification of the self contained keypad to a host, as claimed.

#### Independent Claim 16

Independent claim 16 recites in part ***a top cover placed over the stack and a bottom cover placed under the stack, the top cover and the bottom cover define a common boundary around the stack, the common boundary over molded to encapsulate the stack between the bottom cover and the top cover.*** Halperin is silent regarding the aforementioned novel components. The cited reference discloses a detachable keyboard for a telephone set. Wireless communication between the body and keyboard is used when the card is unclipped, while contacts are activated in the clipped position so that the wireless handset then functions as in the case of a non detachable keyboard [See col. 1 lines 39-43]. Halperin discloses a keyboard card physically comprising contacts along the edges to establish a connection between the keys and the rest of the circuitry. The cited reference fails to recite details regarding a top and bottom cover to the keypad, their common boundary over molded, instead simply teaching a unified card, or singular piece. As such, Halperin fails to disclose the novel components of independent

claim 16.

Independent claim 16 further recites in part *an identification tag that automatically identifies the key pad to a device that hosts the self contained key pad unit*. The Examiner acknowledges that Halperin is deficient regarding the aforementioned novel feature, and cites Nagashima for compensation. On the contrary, Nagashima fails to remedy the deficiencies of Halperin. The cited reference discloses the use of code matching as an anti-theft device. A user input code is compared to a predetermined stored code to determine if normal operation of a car stereo should resume [See col. 6 lines 11-23]. The car stereo will not function without a voluntary action by the user, and as such, the car's recognition of the stereo as a functional device cannot occur without the user. Consequently, the car identifies the stereo in a non-automatic manner, in stark contrast to the subject claim. Therefore, Nagashima, alone or in combination with Halperin, fails to disclose the automatic identification of the key pad to a device that hosts the self contained key pad unit, as claimed.

#### Independent Claim 22

Independent claim 22 recites in part a *means for encapsulating a stack of key pad components between a top and bottom cover to form a stand alone key pad unit*. Contrary to the Examiner's assertions, Halperin is silent regarding the aforementioned novel features. The cited reference discloses a stand alone keyboard card having a numeric keypad attachable and detachable between the microphone and speaker on a handset body [See col. 5 lines 39-41]. Physically, the keyboard card also includes a switch, contacts, clips, and passive tags [See col. 3 lines 51-57]. However, in reciting the keyboard's structure no mention is made regarding its encapsulation or regarding a two piece cover. As such, Halperin fails to teach or suggest the aforementioned novel features.

Independent claim 22 further recites in part a *means for automatically identifying the stand alone key pad to the host device upon mounting thereon*. The Examiner concedes that Halperin fails to teach means for identifying the key pad to the host device upon mounting thereon, and cites Nagashima to compensate for the deficiency. However, Nagashima, like Halperin, is silent regarding the aforementioned novel feature. The cited reference discloses a car stereo antitheft system that requires a user-entered code to match a stored code in order for the stereo to resume full operation [See col. 6 lines 11-23]. Without a user-entered security code,

the stereo is unrecognized by the car, and is thus non-functional. As such, due to its security feature, the stereo is only identified by the car when a user enters the correct input, a non-automatic event. Therefore, Nagashima, alone or in combination with Halperin, fails to teach or suggest automatic identification of a key pad, as claimed.

#### Dependent Claims 2 and 21

Dependent claims 2 and 21 recite *the top cover and the bottom cover sandwich the stack*. Halperin is silent regarding a separate top cover and bottom cover, disclosing only a unibodied keyboard card, and therefore fails to teach or suggest the novel features of the subject claim.

#### Dependent Claim 3

Dependent claim 3 recites *the top cover and the bottom cover are over molded to create a sealed common boundary*. Halperin is silent regarding a distinct top cover and a distinct bottom cover to a keyboard card as it merely discloses a singular piece for the card. Along those lines, over molding of two covers cannot be contemplated by the cited reference as only one cover is disclosed. As such, Halperin fails to teach or suggest the novel features of the subject claim.

#### Dependent Claim 12

Dependent claim 12 recites *sandwiching the key pad components between the top and bottom cover*. Halperin is silent regarding a two piece cover for the key pad components, and therefore fails to teach or suggest the novel features of the subject claim.

#### Dependent Claim 17

Dependent claim 17 recites *the common boundary includes a contact surface of the top and bottom cover*. Halperin discloses a unibodied keyboard card. In doing so, it is silent regarding a cover to the keyboard card comprising two distinct pieces, and thus cannot disclose a common boundary between two covers. As such, Halperin fails to teach or suggest the novel features of the subject claim.

#### Dependent Claim 18

Dependent claim 18 recites *the common boundary includes a perimeter common to the*

***top and bottom cover.*** Halperin is silent regarding a top and bottom cover, disclosing only a single piece, and thus cannot disclose a common boundary of two covers. As such, Halperin fails to teach or suggest the novel features of the subject claim.

In view of the foregoing, it is readily apparent that the subject claims are in condition for allowance, and the rejections of claims 1-3, 5, 11, 12, 14, 16-18 and 20-22 should be withdrawn.

## **II. Rejection of Claims 8 and 13 Under 35 U.S.C. §103(a)**

Claims 8 and 13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Halperin and Nagashima as applied to claims 6 and 11 above, and further in view of US Patent Application No. 2004/0110529 Watanabe *et al.* (Watanabe). Withdrawal of the rejection is requested for at least the following reason. Claims 8 and 13 depend from independent claim 1 and independent claim 11, respectively, and none of Halperin, Nagashima, and Watanabe remedies the aforementioned deficiencies with respect to independent claims 1 and 11. Accordingly, this rejection should be withdrawn.

## **III. Rejection of Claim 7 Under 35 U.S.C. §103(a)**

Claims 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Halperin and Nagashima as applied to claim 5 above, and further in view of US Patent No.5,841,857 Zoiss *et al.* (Zoiss). Withdrawal of the rejection is requested for at least the following reason. Claim 7 depends from independent claim 1, and none of Halperin, Nagashima, and Zoiss remedies the aforementioned deficiencies with respect to independent claim 1. Accordingly, this rejection should be withdrawn.

## **IV. Rejection of Claim 9 Under 35 U.S.C. §103(a)**

Claim 9 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Halperin and Nagashima as applied to claim 1 above, and further in view of US Patent No. 5,517,683 Collett *et al.* (Collett). Withdrawal of the rejection is requested for at least the following reason. Claim 9 depends from independent claim 1, and none of Halperin, Nagashima and Collett remedies the aforementioned deficiencies with respect to independent claim 1. Accordingly, this rejection should be withdrawn.

**V. Rejection of Claim 19 Under 35 U.S.C. §103(a)**

Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Halperin, Nagashima, and Kela as applied to claim 18 above, and further in view of US Patent No. 6,785,395 Arneson *et al.* (Arneson). Withdrawal of the rejection is requested for at least the following reason. Claim 19 depends from independent claim 16, and none of Halperin, Nagashima, Kela, and Arneson remedies the aforementioned deficiencies with respect to independent claim 16. Accordingly, this rejection should be withdrawn.

**CONCLUSION**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [SYMBP192US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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